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ABSTRACT OF THE DISCLOSURE

Methods and systems for monitoring semiconductor fabrication processes are provided. A system may include a stage configured to support a specimen and coupled to a measurement device. The measurement device may include an illumination system and a detection system. The illumination system and the detection system may be configured such that the system may be configured to determine multiple properties of the specimen. For example, the system may be configured to determine multiple properties of a specimen including, but not limited to, critical dimension, a presence of defects, and a thin film characteristic. In this manner, a measurement device may perform multiple optical and/or non-optical metrology and/or inspection techniques.